RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FOURTH SEMESTER EXAMINATION, SEPTEMBER 2020
SECOND YEAR [BATCH 2018-21]

Date : 29/09/2020   **COMPUTER SCIENCE (General)**

Time : 11 am - 1 pm   **Paper : IV**   Full Marks : 25

Answer all the questions

Group A

1. Explain peer-to-peer protocol in network model. [2.5]

2. Write down the differences between MAC and IP address. Write down the differences between Classful and Classless addressing. [2.5 + 2.5]

3. What do you mean by "public network address" and "private network address"? Write down the disadvantages of subnetting. [2.5 + 2.5]

Group B

4. Prove that a graph G is self complementary, if it has 4n or 4n+1 vertices , where n is a non-negative integer. [2.5]

5. a) State whether the following statement is true or false. Justify your answer with example.

   'An Euler graph contains an Eulerian trail'. [2.5]

   b) Calculate the number of all possible simple labelled graphs with n vertices and e edges. [2.5]

6. a) Find the maximum number of edges of a bipartite graph with n vertices . [3]

   b) Is it possible to draw a simple graph of five vertices with degree sequence {1, 1, 2, 4, 4} ? Explain the reason behind your decision. [2]

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